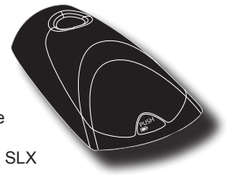
SHURE
LEGENDARY PERFORMANCE™

Model MX890

Wireless Desktop Base

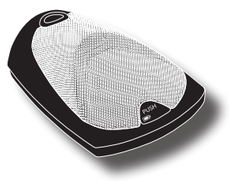
The Shure MX890 desktop base for MX405 and MX410 gooseneck microphones offers cable-free installation for corporate boardrooms or other applications requiring flexible microphone configurations. The MX890 operates within the 518–865 MHz band and is compatible with Shure SLX wireless systems.



Model MX690

Wireless Boundary Microphone

The Shure MX690 microphone offers cable-free installation for corporate boardrooms or other applications requiring flexible configurations. The MX690 operates within the 518–865 MHz band and is compatible with Shure SLX wireless systems.



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EU Declaration of Conformity

The CE Declaration of Conformity can be obtained from:
www.shure.com/europe/compliance
Authorized European representative:
Shure Europe GmbH
Headquarters Europe, Middle East & Africa
Department: EMEA Approval
Jakob-Dieffenbacher-Str. 12,
75031 Eppingen, Germany
Phone: +49-7262-92 49 0
Fax: +49-7262-92 49 11 4
Email: EMEAsupport@shure.de

SHURE Incorporated http://www.shure.com
United States, Canada, Latin America, Caribbean:
5800 W. Touhy Avenue, Niles, IL 60714-4608, U.S.A.
Phone: 847-600-2000 U.S. Fax: 847-600-1212 Int'l Fax: 847-600-6446
Europe, Middle East, Africa:
Shure Europe GmbH, Phone: +49-7262-92 49 0 Fax: +49-7262-92 49 11 4
Asia, Pacific:
Shure Asia Limited, Phone: 852-2893-4290 Fax: 852-2893-4055

SHURE

Features

- Sleek, low profile design
- Frequency agile, microprocessor controlled transmitter
- IR link to SLX receiver for automatic frequency synchronization
- Programmable frequency Group/Channel display
- Programmable mute function
- Operates on two AA batteries
- Compatible with all Shure SLX Wireless systems
- Supports Shure MX405 and MX410 Mini Gooseneck Microphones*
- Commshield® technology for protection from RF interference

*MX890

MX890 Microphone Placement

Place the MX890 no more than 25 cm (1 ft.) from the edge of the table. Aim the microphone toward the talker and away from loudspeakers and noise sources. Use one microphone for each talker. Pickup angle with a cardioid cartridge is 130° at –3 dB. Pickup angle with a supercardioid cartridge is 115° at –3 dB.

Note: *To minimize RF interference, maintain a distance of at least 0.3 m (1 ft.) between transmitters. In case of interference, increase the distance between transmitters or change channels.*

MX690 Microphone Placement

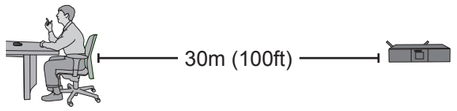
Place the MX690 within 1.5 m (5 ft.) of a talker. Aim the microphone toward the talkers and away from loudspeakers and noise sources. Use one microphone for every two talkers. Pickup angle with a cardioid cartridge is 130° at –3 dB.

Note: *To minimize RF interference, maintain a distance of at least 0.3 m (1 ft.)*

Receiver

Make sure the receiver is within sight of the transmitter. Do not place receiver behind a metal barrier or any reflective surface.

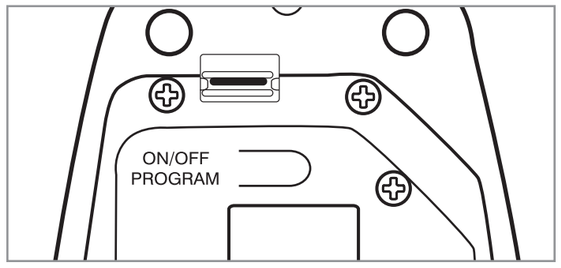
Refer to the SLX Wireless System User Guide for more information, or visit www.shure.com.



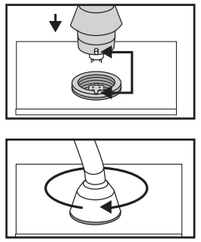
Power On/Off

1. Press and hold the ON/OFF PROGRAM button for approximately 2 seconds. The LCD illuminates.
2. To turn the transmitter off, press and hold the ON/OFF PROGRAM button again.

Note: *Use the button on the bottom of the transmitter to power it on without opening the battery compartment.*

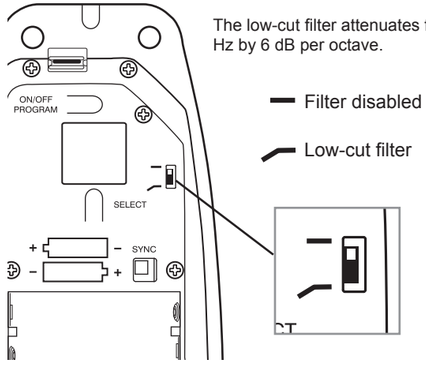


MX890 Connecting Gooseneck



1. Align the pin on the microphone flange with the slot on the desktop base.
2. Insert the gooseneck into the desktop base and lock it in place by rotating the gooseneck sleeve clockwise.

Low-Cut Filter



The low-cut filter attenuates frequencies below 150 Hz by 6 dB per octave.

Filter disabled (as supplied)

Low-cut filter

Mute Button

The mute button can be configured for toggle or momentary operation.

Toggle (as supplied)

The PUSH button toggles the microphone between active and muted states.

NOTE: *The microphone always powers up in the active state.*

Momentary

There are two types of momentary operation:

Push-to-Mute: The microphone is muted only while the button is pressed and held.

Push-to-Talk: The microphone is active only while the button is pressed and held.

To change between toggle and momentary:

Hold the PUSH button and press the SELECT button. (Test the microphone to confirm the change.)

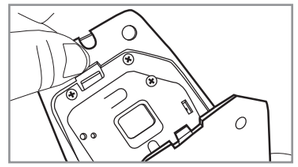
Hold PUSH + SELECT

To change between push-to-talk and push-to-mute:

1. Set the button for momentary operation.
2. Hold the SELECT button and press the PUSH button.

Hold SELECT + PUSH

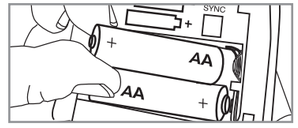
Battery

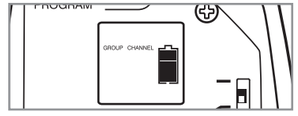


Installation

1. Open the battery compartment as shown.
2. Insert two1.5V "AA" batteries. Make sure the +/– terminals are properly oriented.

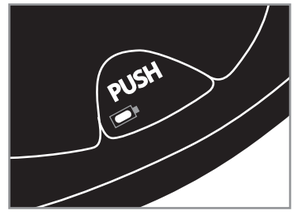
Note: *Alkaline batteries last up to 8 hours. Rechargeable, carbon-zinc, and zinc-chloride batteries provide less operating time.*





Power Meter

The battery meter on the LCD shows remaining battery life.



Low Power Indicator

Steady Red: Power low. Replace batteries immediately

Pulsing Red: Batteries dead. Transmitter cannot be turned on until batteries are replaced.

Mute Indicator

MX890

The desktop base illuminates the gooseneck microphone LED to indicate whether the microphone is active or muted.

Refer to the following table:

Microphone Status	MX405 / MX410 Indicator	MX405R / MX410R Light Ring
Active	Green	Red
Muted	Red/Flashing Green*	Off/Flashing*

MX690

The bi-color LED on the top of the microphone indicates whether the microphone is active or muted.

The LED can also be set to flash when muted.

Display Mode	Status Indicator
Steady (as supplied)	Active = Green
	Muted = Red
Flashing	Active = Green
	Muted = Flashing Green

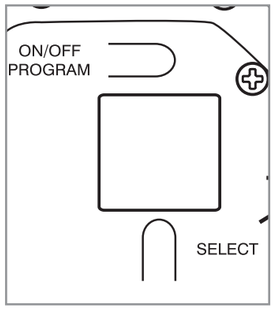
*To toggle between off and flashing, press PUSH and ON/OFF PROGRAM simultaneously.

PUSH + ON/OFF PROGRAM

Locking Settings

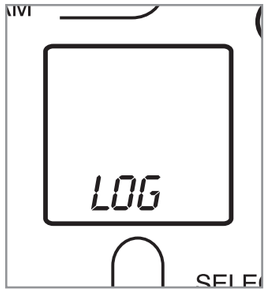
Press ON/OFF PROGRAM and SELECT simultaneously to lock or unlock transmitter settings. When locked, the current settings cannot be manually changed.

Note: *Locking the transmitter settings does not disable IR frequency synchronization or the High Pass/Low Cut filter.*



LOGIC MODE

To use with a logic enabled receiver, you must perform an automatic sync. The LCD flashes "log" during sync. Once in logic mode, the LCD flashes "log" when powered up.



Frequency Bands

Band	Range
H5	518–542 MHz
J3	572–596 MHz
L4	638–662 MHz
P4	702–726 MHz
R13	794–806 MHz
R5	800–820 MHz
S6	838–865 MHz
JB	806–810 MHz
Q4	740–752 MHz
G4	470–494 MHz
G5	494–518 MHz

Note: *This radio apparatus may be capable of operating on some frequencies not authorized in your region. Please contact your national authority to obtain information on authorized frequencies for wireless microphone products in your region.*

Master List Frequencies

The Master List is an index of all frequencies in a band, including those not assigned to a Group or Channel. The Master List can only be accessed through the receiver, so the transmitter must be synchronized via the IR port. When a Master List frequency is in use, "MASTER LIST" appears on the display. Refer to the SLX Wireless System User Guide for more information.

Note: *Wireless devices such as cellular phones and two-way radios may interfere with wireless microphones. Keep these and other potential sources of interference away from the transmitters and receivers.*

Automatic Frequency Synchronization

1. Power off all transmitters.
2. Power on all receivers.
3. Begin with the first transmitter. Open the battery cover and power it on.
4. Aim the IR sensor at the first receiver IR port. The transmitter should be no more than 15 cm (6 in.) from the receiver. Press and hold the receiver SYNC button to send group and channel data to the transmitter. The red LED on the transmitter will stop flashing when programming is complete.
5. Power off the first transmitter and repeat the synchronization with each additional transmitter and receiver pair.

Manual Frequency Synchronization

1. Press and hold the transmitter SELECT button until the desired group number appears.
2. Press SELECT again and release it when the desired channel number appears.

Tips for Optimum Performance

- Maintain a direct line of sight between the transmitter and receiver antennas.
- Avoid placing the transmitter on metal surfaces.
- Avoid placing laptop computers or other obstructions in front of the microphone during use.
- Only use with a Shure SLX4 wireless receiver.

Transmitter Specifications

Operating Range
30 m (100 ft.)
Note: *Actual range depends on RF signal absorption, reflection, and interference*

Frequency Stability
±10 ppm

Maximum Frequency Deviation
45 kHz

Oscillator Type
Phase-locked loop (PLL) controlled synthesizer

Power Requirements
3V (2 AA alkaline or rechargeable batteries)

Battery Life
≥8 hours (alkaline)

Power Consumption
130 mA, 15 mA

Operating Temperature Range
-18–57 °C (0–135 °F)
Note: Battery may limit this range

Dimensions
43 mmH x 87 mmW x 148 mmD (1 11/16 x 3 3/8 x 5 13/16 in.)

Weight MX890
Net: 312 g (11 oz)
Packaged: 530 g (18.7 oz)

Weight MX690
Net: 319 g (11.2 oz)
Packaged: 516 g (18.2 oz)

Troubleshooting

If you encounter difficulty with the SLX Wireless System:

- Make sure both the transmitter and the receiver are turned on.
- Replace the battery if the battery LED is red.
- Make sure the Group/Channel settings for each transmitter-receiver pair are identical.
- Make sure there is an unobstructed line of sight between the transmitter and receiver.
- If necessary, reposition the receiver or decrease the distance between transmitter and receiver.
- Remove local sources of RF interference, such as computers or lighting equipment.
- Remove metal objects within 0.3 m (1 ft.) of the transmitter

Note: *Refer to the SLX Wireless System User Guide for complete troubleshooting procedures.*

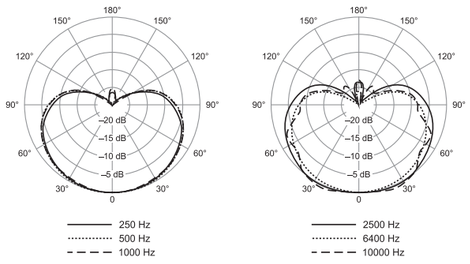
Microphone Specifications

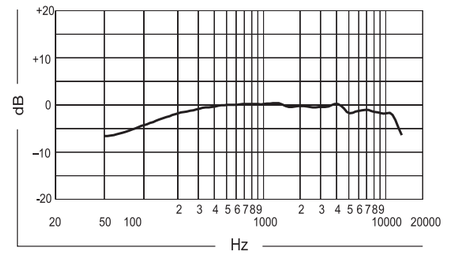
MX890

Note: *See gooseneck microphone, MX690, for acoustic specifications.*

MX690

Type	Condenser (electret bias)
Frequency Response	50–17000 Hz
Polar Pattern (at 1 kHz)	Cardioid
Sensitivity (at 1 kHz , open circuit voltage) 1 Pascal=94 dB SPL	–33 dBV/Pa (22 mV)
Dynamic Range (1 kΩ load at 1 kHz)	96 dB
Common Mode Rejection (10 Hz to 100 kHz)	45 dB minimum
Preamplifier Output Clipping Level (1% THD)	–6 dBV (0.5 V)
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector or tip of 1/4" phone plug.





Frequency Selection

Shure offers wireless systems in a selection of bands that conform to the different government regulations of specific nations or geographic regions. These regulations help limit radio frequency (RF) interference among different wireless devices and prevent interference with local public communications channels, such as television and emergency broadcasts.

The system's band and frequency range are identified on the receiver and transmitter. For example, "H4 518-578 MHz."

For information on bands available in your area, consult your local dealer or phone Shure. More information is also available at Shure's website (www.shure.com).

Licensing

Licensing of Shure wireless microphone equipment is the user's responsibility, and licensability depends on the user's classification and application, and on the selected frequency. Shure strongly urges the user to contact the appropriate telecommunications authority concerning proper licensing, and before choosing and ordering frequencies.

Changes or modifications not expressly approved by Shure Incorporated could void your authority to operate this equipment.

Certification

Certified to FCC Part 74 (FCC ID: DD4MX890).

Certified by IC in Canada under RSS-123 and RSS-102 (IC: 616A-MX890).

Meets essential requirements of the European R&TTE Directive 99/5/EC (ETSI EN 300-422 Parts 1 & 2, EN 301 489 Parts 1 & 9) and eligible to carry the CE marking.

Changes or modifications not expressly approved by Shure Incorporated could void your authority to operate this equipment.

CE 0682 Ⓘ

IMPORTANT SAFETY INSTRUCTIONS

1. READ these instructions.
2. KEEP these instructions.
3. HEED all warnings.
4. FOLLOW all instructions.
5. DO NOT use this apparatus near water.
6. CLEAN ONLY with dry cloth.
7. DO NOT block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. DO NOT install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. DO NOT defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. PROTECT the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. PROTECT the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. ONLY USE attachments/accessories specified by the manufacturer.
12. USE only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.
14. REFER all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. DO NOT expose the apparatus to dripping and splashing. DO NOT put objects filled with liquids, such as vases, on the apparatus.
16. The MAINS plug or an appliance coupler shall remain readily operable.
17. The airborne noise of the Apparatus does not exceed 70dB (A).
18. Apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.
19. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
20. Do not attempt to modify this product. Doing so could result in personal injury and/or product failure.

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

WARNING:
Voltages in this equipment are hazardous to life. No user-serviceable parts inside. Refer all servicing to qualified service personnel. The safety certifications do not apply when the operating voltage is changed from the factory setting.

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.